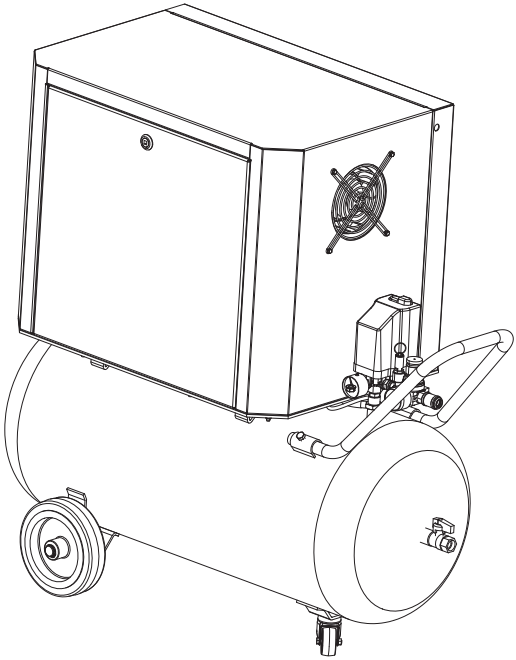
Pulsar/S 102-103

Use & Maintenance manual



CE

cod.197DD8600 - Ed.0 - 05/2012

INDEX 2
FOREWORD 3
1. GENERAL INFORMATIONS 4
2. INSTALLATION 6
3. START-UP 7
4. MAINTENANCE 8
5. TROUBLESHOOTING 10

Use of the Instruction manual

This manual is integral part of this compressor and should be kept for its whole working life.

Keep this manual in a safe place so not to damage it.

If the compressor is sold to a third party, also give the Instruction Manual to the new Owner.

This manual should be carefully read before starting the compressor up and in case of any doubt on its operation.

This manual contains important safety information on operation procedures, which should be complied with, otherwise injuries to people or damages to the machine might occur. Important use and maintenance instructions are also mentioned in this manual.

Should this manual be lost, please ask for a new copy

Spare parts list is not considered as integral part of this manual, since it is available at authorized dealers' offices only.

Symbols

The following symbols are used for especially important information:

Caution

Highlights precautions to be taken to ensure safety of the operator, people in the compressor working area and the compressor.

Notes

Highlights recommended instructions or precautions to be taken to have an easier maintenance procedure or to explain most important instructions.

Specialized personnel

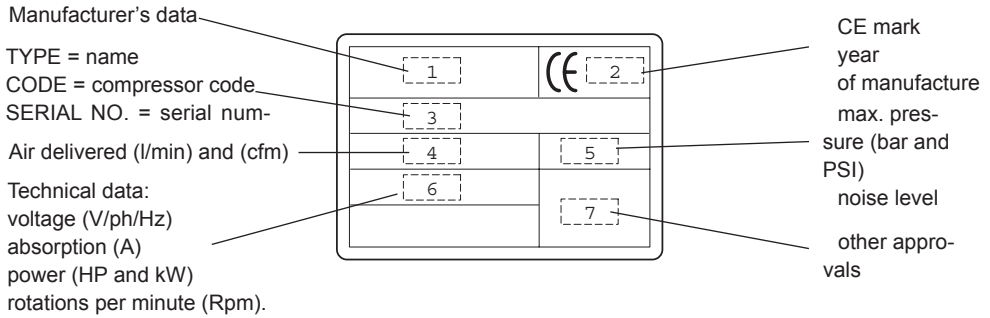
Every intervention highlighted by this symbol is exclusively the job of a specialized technician.

Technical Assistance

Use only genuine spare parts for servicing the compressor.

Non-genuine spare parts might cause injuries to people. For efficient Technical Assistance, please always state model, type and part number of Your compressor. Those data are specified both on compressor plate and label on manual cover page.

Product identification



1.GENERAL INFORMATION

This compressor was designed and manufactured to be used only to deliver compressed air for handicraft and/or industrial applications in full compliance with the safety instructions provided in the following paragraphs.

Compressor can be equipped with several accessories for blowing, washing and painting as well as air tools. See the relevant manuals for correct use of accessories and tools.

Carefully read the User's Manual before servicing the compressor.

Before performing maintenance work, switch off the compressor and cut off power supply by switching off the wall-mounted switch (if any).

What SHOULD BE DONE:

- Understand how to stop the compressor at once and become familiar with the use of all controls.• Before any operation the compressor tank should be emptied. Unplug the compressor so to avoid any

  accidental compressor start.
- After any maintenance operation make sure all the disassembled parts are properly assembled.
- To have a safe operation, make all checks mentioned in chapter "Start-up" before starting

  the compressor.
- Keep children and animals away from the working area, so as to avoid any injury caused by devices

  connected to the compressor.
- Carefully read the instructions of any tool you have installed, especially if a spray gun is used, make sure the shop is well ventilated before you start painting.
- Always start and stop three-phase compressor through the wall switch.
- Should the compressor be working around the clock, the use of soundproof headset is recommended.

What SHOULD NEVER BE DONE:

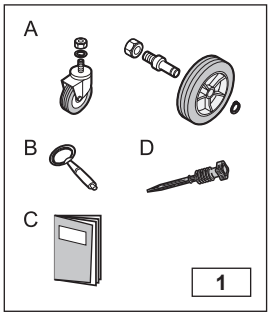
- Do not paint indoor or close to naked flames.
- Never touch cylinder head, cooling fins and delivery tube since they become very hot while working. They are still very hot for some time after stopping the compressor.• Never place inflammable nylon or cloth objects near or/and on the compressor.
- Never move the compressor when the tank is under pressure.
- Never use the compressor if the power cable is faulty or the connection is not safe.
- Never aim the air jet either at people or animals.• Never allow anyone to operate the compressor without giving him/her proper instructions
- Never hit flywheel and fans with metal or blunt objects. Compressor might break or be seriously damaged.
- Never operate the compressor without an air filter.
- Never tamper with the safety valve or the tank.
- Never use the compressor in potentially explosive premises.
- Never connect the air outlet cock to a tube with a max. capacity which is lower than the compressor capacity.

Never run the compressor when temperature is under 0°C . Operating temperature range: +5°C/+40°C.

Standard accessories

Your compressor will come equipped with (fig.1):

a) Wheels kit
b) cab opening key
c) use and maintenance manual
d) oil level dipstick



Unpacking and Handling

This machine is supplied on a wooden pallet and protected by a top paper cover.

1. Wear safety gloves and cut straps with scissors and withdraw the paper from the machine top.
2. Hoist the compressor using a means with a suitable lifting power
3. Fit the wheels and/or the anti-vibrating elements.

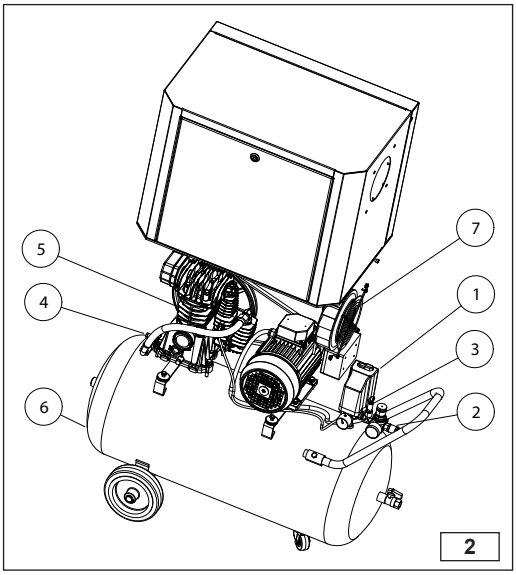
Before accepting the delivery, check all machine parts and accessories are included and for the perfect integrity of the machine. Possible objections will not be accepted after delivery acceptance.

We recommend the package be kept so that it can be used again in case the compressor is moved. Keep it for the warranty period at least. If needed, it will be easier and safer to pack and send it to the service center. After this period, deliver the package to the authorized organization for its disposal.

Compressor description

Compressor main components are (fig.2):

1. Pressure switch/remote pressure switch
2. Line valve
3. Safety tap
4. Check valve
5. Pumping unit
6. Tank
7. Cooling fan



2. INSTALLATION

Placement

Upon installation, make sure that the chosen place is in compliance with all prevailing national safety standards and meets the following requirements:

- low percentage of dust suspended in air,
- shop must be suitably sized and well ventilated so that room temperature never exceeds 40°C when the compressor is working. If this is not the case, install one or more exhaust fans to extract hot air. Ideally, the fans should be installed close to the ceiling.
- Leave at least 20 cm between the machine and any object which might obstacle a proper air flow and therefore reduce ventilation and cooling.
- Lubricated machines: to be never positioned on slopings over 15°C

Power connection

The compressor is delivered to the Customer after being successfully tested by the Manufacturer. When purchased is therefore ready for use.

Electrical hook-up is of major importance. Before performing any operation is **very important** to make sure that the voltage mentioned on the compressor label (or on the label on the cover sheet of this manual) complies with the mains voltage and the main switch is on OFF/0 (fig.3)

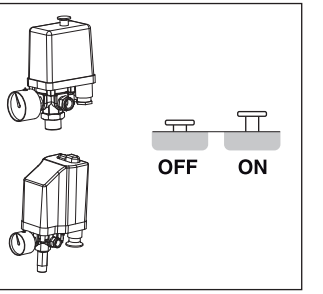
- Single-phase models

Connect the plug to a proper socket. **Call only specialized personnel, in case of changes to be made for compliance with the standards of the country in which the compressor is used.**

- Three-phase models

Call a **specialized technician** for installing a wall switch equipped **with fuses having values not under the values indicated in the relevant table**. Install the switch close to the machine cable exitand at operator's reach.

3

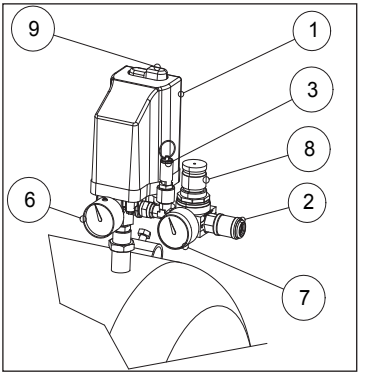


(HP)	V230	V400
2	6,2 A	3,6 A
3	8,6 A	5 A

3. START-UP

Controls and control instruments

1. Pressure switch (single phase model)
   built-in pressure switch (three-phase model)
2. Line cock
3. Safety valve
6. Tank pressure gauge
7. Air outlet pressure gauge
8. Pressure reducing valve
9. ON/OFF switch



4

Operation

The compressor starts operating under the control of the pressure switch/remote pressure switch and stops when it reaches the maximum allowable pressure. During this stage the valve at the base of the pressure switch discharges the air contained in the final collector and in the head, thus facilitating the next start-up.

Therefore an air blast that lasts several seconds in coincidence with the compressor stopping is therefore a sign that it is working properly. As soon as the pressure reaches the

minimum allowable value the compressor restarts automatically.

Operating pressure adjustment

Check for optimal operating pressure value of the accessory to be used with the relevant manual.

Adjust the air pressure at the outlet according to the required value through the pressure reducing valve 8 (fig.4). Turn the knob clockwise to increase pressure and anti-clockwise to decrease. The set value is indicated by the pressure gauge 7 (fig.4).It is recommended the pressure value be zeroed after use so that the pressure reducing valve will not be subject to earlier wear.

First start-up

Once the compressor has been carefully positioned and connected, it is ready for start-up.

It is recommended this operation - operational test - be performed by a specialized technician.

Before continuing, make sure that

- mains voltage is the same as voltage mentioned in the machine plate;
- all connections have suitable cross-section cable (see table) and that cables are neither damaged nor have bare wires;
- wall switch is equipped with suitable fuses (see table);
- oil level is over the minimum level.

After checking the above, proceed as follows:

- Power the wall switch on (Three-phase Pulsar).
- Plug the machine (Single-phase Pulsar);

Start the compressor by pressing the pressure switch/remote pressure switch (fig.3)

Leave it running for at least 2 minutes with the air valve open, when the time has elaps close the valve and check that the compressor loads the tank and stops when it reaches the maximum pressure detected by the pressure gauge 6 (fig. 4).

Never unplug the compressor to stop it but always position either the switch on the pressure switch body or the wall switch to Off. In this way the compressed air in the head will be bled, thus favoring next compressor start.

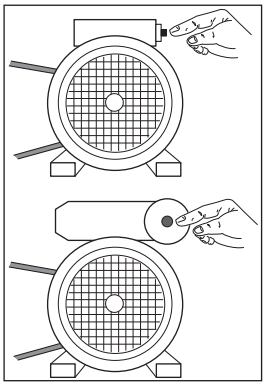
Safety devices

Safety valve on the pressure switch/built-in pressure switch: bleeds the air off once the max. safety value has been reached.

Motor thermal cutout (fig.5): in case of motor overheating due to some troubles, this device will trip, thus cutting the machine out and avoiding any motor damage.

Allow some minutes (about 5) before manually resetting the thermal cutout so that the motor can restart.

If the switch trips again on motor restarting, power the machine off. Unplug the compressor and call an authorized service center.



5

General information

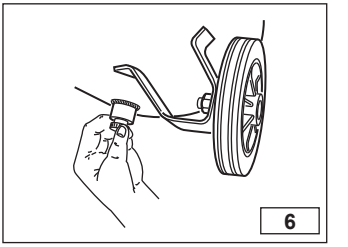
The compressor should be serviced at regular intervals for a proper operation. Switch the compressor off and bleed all air off the tank before any servicing.

After first 100 working hours

- Check for proper tightening of all screws, in particular the head screw.
- Check for the proper tightening of all pipe fittings.
- Check that no dust is inside the box and see whether the installation place is really the right one. **Compressor should not be dusty**.
- Change oil (fully) using one of the safety oil types indicated on page 7.

Condensate drain (weekly)

Condensation is drained via the valve located under the tank, simply open the valve by turning it counterclockwise, after placing a container underneath it, and keep it open until only air comes out (fig. 6).



If your compressor is of the lubricated type, condensate should never be drained into the sewage system since it may be polluant.

Clean air suction filter (monthly)

A) PULSAR/S 102 (fig.7a)

Open the front panel with supplied key.

Carefully rotate the filter upwards and remove it (1, 2).

By leveraging under tabs A remove the cap. Remove filtering part B and wash it with soap and water. Leave it to fully dry and put it back in its place.

Reclose the filter and refit it on the compressor.

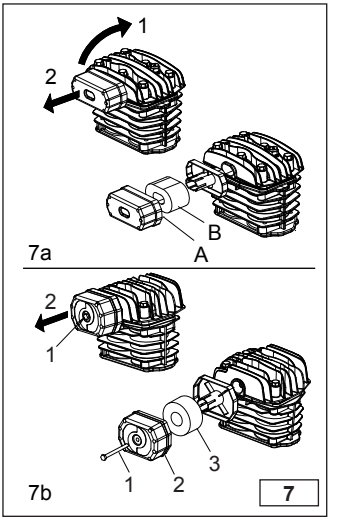
B) PULSAR/S 103 (fig.7b)

With a n.10 hex wrench remove screw 1.

Remove cap 2 and extract filtering part 3.

Wash it water and soap and let it fully dry before putting it back in its place.

Reassemble cap 2 and screw 1.



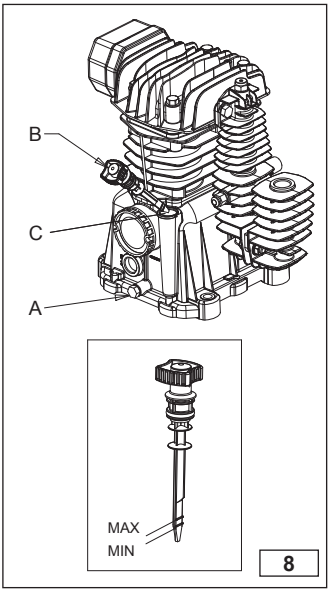
Never run the compressor if suction filter is not fitted. Should foreign bodies or dust go into the filter, its inner parts might seriously damage.

NOTE: CHANGE THE FILTERING ELEMENT AFTER TWO OIL CHANGES.

Check and top-up oil (monthly)

Remove the cover as shown in the previous section.

Extract oil dipstick B and check that the level ranges between min. and max., if needed top up via inlet C (fig.8).



Change oil (every six months)

Extract oil dipstick B,

unscrew plug A, and drain the used oil into a collection container,

screw plug A back on and act as described in the previous section.

Carry out the oil top up and replacement operations when the compressor is hot

Never mix different types of oil together.

Poor oils are not recommended,since they may have unsuitable lubrication properties.

Recommended oils

SHELL Rimula D Extra 15W-40
FUCHX Renolin 104L VG100
AGIP Dicrea 100
API CM-8X
BP Energol CS100
CASTROL Aircol PD100
ESSO Exxc Olub H150
IP Calatia Oil ISO 100
MOBIL Rarus 427
TOTAL Dacnis P100

OIL SHOULD ALWAYS BE DISPOSED OF IN COMPLIANCE WITH CURRENT LAWS. CALL AUTHORIZED BODY FOR ITS DISPOSAL.

Later maintenance

- Every 6 months

It is recommended to clean all compressor finned parts for an efficient cooling system and therefore a higher machine performance.

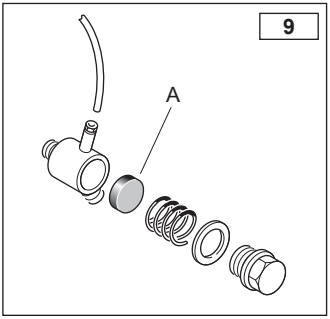
- Each year

Change the filtering element.

- Each two years

1. Check and clean delivery and suction valves.
2. Check for proper conditions of the non-return valve and change the gasket A, if necessary (fig. 9).

In these cases, it is recommended all seals be changed.



5.TROUBLESHOOTING

Problem	Cause	Remedy
Air leaking off pressure switch valve when the compressor is stopped.	Check valve leaking.	Bleed air off the tank, remove the check valve cap and clean valve seat and sealing element. Replace the sealing element, if necessary.
Air leaking off pressure switch valve for a long time when the compressor is running.	Loadless start valve broken.	Replace the valve.
The compressor stops and cannot be restarted.	Motor overheating, Thermal cutout tripped.	Allow some minutes (about 5) before manually resetting the thermal cutout. Should the compressor stop once again, call a specialized technician.
	Winding burnt.	Call a specialized technician.
The compressor stops once max. pressure has been reached and the safety valve starts working.	Pressure switch defective or broken.	Call a specialized technician.
The compressor does not charge and causes overheating.	Heat gasket or valve broken.	Stop the compressor with no delay and call a specialized technician.
The compressor is too noisy and rattles.	Bearings seizure.	Stop the compressor with no delay and call a specialized technician.